REMARKS

The Official Action has finalized the rejections of record. All are under 35 USC §103. Favorable reconsideration is requested in concert with the following comments:

1. Motivation and Hindsight:

The §103 rejections are all founded on the combination of Yasuda with Sonnichsen.

Yasuda discloses frame imaging the eccentric rotation of a gold bead linked to F1-ATPase. Motion is detected by sequential CCD photos of the resulting 'spot.' Applicants' specification addresses the shortcomings of such a process (page 4, lines 9-14):

> "In general, it is difficult to observe rotation of a circular object at any scale when viewed along the axis of rotation unless the rotation of the object is eccentric to the axis of rotation and/or the rotating object has an asymmetric shape."

Sonnichsen, in direct contrast to this context, is not involved with rotation or movement of any kind. It is not concerned with detection of motion. It is not concerned with the practical applications envisioned by the present invention, such as e.g. monitoring and characterizing nanoscopic systems subject of such motion.

Sonnichsen is instead, by its own words, interested in Surface Enhanced Raman Scattering (SERS). SERS, as understood by the artisan, is a technique related to structural investigation. Typically, spectra consequent to excitation radiation correlate to structural information relating to the molecules analyzed. This effect is related to chemical and electromechanical mechanisms and is normally observed in proximity to metallic surfaces with suitable roughness with particles such as metal colloids or

nanoparticle films. By all accounts, SERS --and thus Sonnichsen-- takes place in a static environment.

Why then would one reading Yasuda (involving motion), mindful of the difficulties ascribed to such motion detection, have any recourse to look to Sonnichsen, directed to SERS? Answer: one would not.

No motivation for the combination has been officially espoused, other than in conclusory fashion, the Final Action merely stating:

> "...one of skill in the art would have recognized that since gold nanorods have two different surface plasmon resonances it would be possible to use gold nanorods for detecting rotation by observing the alternating first and second wavelengths of light as the nanorods move from a first position...to a second position..."

Applicants respectfully submit there is inadequate motivation to combine these references under §103. They are too disparate in context. In this regard, Applicants further respectfully submit that improper hindsight has crept into the analysis. While KSR has restated the §103 parameters, it did not do away with the need to find some articulable motive to combine. Indeed, it has been subsequently held that looking to the problem is a way to avoid hindsight. See e.g. Ortho-McNeil Pharmaceutical Inc. v. Mylan Laboratories Inc., 86 USPQ2d 1196, 1202 (Fed. Cir. 2008):

> "As this court has explained, however, a flexible TSM test remains the primary guarantor against a non-statutory hindsight analysis such as occurred in this case. In re Translogic Tech., Inc., 504 F.3d 1249, 1257 (Fed. Cir. 2007)("[A]s the Supreme Court suggests, a flexible approach to the TSM test prevents hindsight and focuses on evidence before the time of invention."). The TSM test, flexibly applied, merely assures that the obviousness test proceeds on the basis of evidence – teachings, suggestions (a tellingly broad term), or motivations (an equally broad term) – that arise before the time of invention as the statute requires."

Applicants aver that one in the art, at the time of invention, looking to advance how rotating nanosized objects could be detected, would not look to art directed to static surface analysis. The two are concerned with different problems. Only by reading the specification, and then looking back, does one even begin to consider Sonnichsen, *pro arguendo*.

The addition of the Pettingell reference is not curative. In fact, it exacerbates the issue. Among other things, its inclusion presupposes the propriety of the Yasuda-Sonnichsen, hereby disputed for the reasons above.

2. Yasuda + Sonnichsen

Even assuming such a combination were proper under §103, which Applicants gainsay, and one were to swap Yasuda's bead for one of Sonnichsen's nanorods, there would be no reason whatsoever to alter Yasuda's frame imaging techniques. The Final Action states that because Sonnichsen's rods allegedly scatter polarized light, one would necessarily modify Yasuda. But Sonnichsen makes a important disclosure that indicates one would instead maintain Yasuda's methodology; i.e. Sonnichsen observes (pg. 077402-4, col.1) that:

> "the rods appear as bright in the microscopic measurement as spheres of much larger volume (cf. Figs. 2 and 3a)."

So, even if one were to attach a Sonnichsen rod to Yasuda, one would do so for purposes of enhanced brightness for frame 'spot' imaging technique. Because this is in keeping with the context of Yasuda, it must be considered as definitive. To leap beyond this and posit that one would wholly discard and revamp the Yasuda technique (which would not need changing otherwise) to that which is now claimed, distorts what an

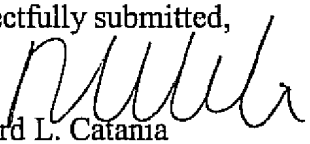
objective and reasonable combination envisions. And it bespeaks a further hindsight reconstruction of the art.

3. Conclusion

Applicants thus respectfully request that the combination of Yasuda with Sonnichsen, affecting all the claims, be carefully reconsidered in view of the foregoing, and withdrawn, with the case passing to issuance.

If the rejection is not to be withdrawn, then Applicants respectfully request a full articulation of the motivation to combine, and how this is consistent with current law, in order to put the case in better condition for appeal.

Respectfully submitted,



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